

**STOREYUS, A NEW GENUS AND STOREYUS PSEUDODIPTERUS, A
NEW SPECIES OF CETONIINAE (COLEOPTERA:
SCARABAEIDAE) FROM AUSTRALIA, WITH A REDESCRIPTION
OF LENOSOMA KRAATZ**

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Abstract

Storeyus gen. n. and *Storeyus pseudodipterus* sp. n. are described from Australia. *Lenosoma fasciculatum* (Macleay, 1863) is newly transferred to *Storeyus* and designated as the type species. The genus *Lenosoma* Kraatz, 1880 is redescribed and a lectotype is designated for *Lenosoma fulgens* (Macleay, 1863). A distribution map for each species is provided.

Introduction

Macleay (1863) described four new cetoniid species in *Schizorhina* (*Cetonia*) Kirby, 1825: *S. fulgens*, *S. tibialis*, *S. fasciculata* and *S. incana*. Because he found them to 'differ considerably in form and general appearance from the rest of the Australian Cetoniidae', Macleay grouped them in a sub-section which he named *Lenosoma*. At that time, both the genus *Schizorhina* and Macleay's sub-section *Lenosoma* served as a catch-all for species with very different characteristics. Macleay (1871) described *Schizorhina viridicuprea*, which was synonymised with *L. fulgens* by Lea (1914). *Lenosoma incana* was synonymised with *Neolithria eburneoguttata* (Blanchard, 1850) by van de Poll (1886).

Kraatz (1880) was the first author to use the name *Lenosoma* at a generic level. He selected *L. fulgens* as its type species and reformulated the generic characters, using only Macleay's original species descriptions. Papers by Gemminger and Harold (1869), Berge (1884), Masters (1886) and Schenkling (1921) are catalogues, which listed some or all of the species and synonyms but using inconsistent generic associations. Lea (1914) presented a detailed description of the known, and sometimes quite spectacular, colour forms of *L. fulgens*.

In his supra-generic revision of the Cetoniinae, Krikken (1984) regarded *Lenosoma* as a heterogeneous and composite group requiring further study. The discrepancy was partly resolved when Allard (1995) assigned *L. tibialis* to genus *Clithria* Burmeister, 1842. Allard (1995) also illustrated the species of *Lenosoma*, *Clithria* and *Neolithria* van de Poll, 1886. Recent publications listing *Lenosoma* are the Zoological Catalogue of Australia (Cassis and Weir 1992) and its subsequent online version, the ABRS (Cassis *et al.* 1992, Calder 2002) and Reid and Bulbert (2002), who provided a description of *Lenosoma fasciculatum*.

Methods and abbreviations

Lengths were calculated for specimens where the clypeus does not extend forward. Latitudes and longitudes were determined using Geoscience Australia's online Place Name Search with location name. Specimens without unique identifiers were labelled with a new unique identifier using the prefix 'MIC'. A collection identifier in square brackets generally follows the unique identifier. Images of the male holotype of *S. pseudodipterus* were taken with a Canon 40D on a Leica MZ6 microscope and images of the female paratype were taken with a Canon 40D with macro lens. Both images were montaged using Helicon Focus Software. Genital drawings were produced on a graphics tablet from images taken on a Leica M165C with DFC290 camera and LAS software.

Collections and institutions are abbreviated as follows: AH - A. Hiller coll., Mount Glorious, Qld; AIF - Australian Insect Farm (J.W. Hasenpusch), Innisfail, Qld; AM - Australian Museum, Sydney, NSW; ANIC - Australian National Insect Collection, CSIRO, Canberra, ACT; CMAR - CSIRO Marine and Atmospheric Research, Cleveland, Qld; CSIRO - Commonwealth Scientific and Industrial Research Organisation; M&GDB - M. and G. De Baar coll., Corinda, Qld; MV - Museum Victoria, Melbourne, Victoria; RZ - R. Zietek coll., Capalaba, Qld; SAM - South Australian Museum, Adelaide, South Australia; QFIC - Qld Forest Insect Collection, Brisbane, Qld; QM - Queensland Museum, Brisbane, Qld. Other abbreviations are: JH - Jack W. Hasenpusch; QLD; Qld - Queensland; NSW - New South Wales.

Genus *Lenosoma* Kraatz, 1880

Lenosoma Kraatz, 1880: 212.

Lenosoma Macleay, 1863: 18 (as sub-section in subgenus *Cetonia* Fabricius, Section *Trichioideae* Macleay)

Type species: *Schizorhina (Cetonia) fulgens* Macleay, 1863, by original designation

Redescription. Male. Small cetoniid. Metallic coloured. Head. Clypeus setose posteriorly. Galea bearing a dense tuft of setae. Clypeus tapering towards apex but only slightly rounded. Sides with raised margins. Anteromedian edge with shallow notch, visible from above and behind. Club of antenna approximately half as long as clypeus.

Thorax. Scutellum glabrous. Pronotum sparsely covered with short setae, less so anteriorly. Midline of pronotum glabrous, with a large and densely rugose impression on either side. Elytra sparsely setose. A row of long setae on anterior half of lateral edge of elytra. A row of long setae in juxtascutellar and juxtasutural areas. Sides of elytra rugose from posterior of humeral umbone to apex, rugose in circles around anteapical umbone. Mesometasternal protrusion covered with seta, except for glabrous apex. Metasternal disc glabrous. Long, curved setae originating from mesosternum and surrounding process. Profemur and mesofemur with long, yellowish setae

on internal edges. Internal edge of metatibia with a row of short setae. Anterior corner of pronotum with pointed projection. Lateral edge of pronotum indented over half or more than half of its length towards base, with sharp keel which becomes broad and flat in posterolateral area. Basolateral margins distinctly emarginate, creating acute posterolateral angle. Middle of pronotum broadly elevated in anterior half, projecting only very lightly above clypeus in lateral view. Discolateral costa very pronounced except for an interval in posterior of mediodiscal area. Discomedian costa strongly elevated from posterior of mediodiscal area to anteapical umbone. Anterior section of discolateral costa diagonal and flowing into anterior of disomedian costa. Suture forming elevated keel in apical half. Mesometasternal suture weak or absent. Mesometasternal protrusion broadly rounded or lightly pointed medially. Metasternal suture well developed. Protibia tridentate with widely spaced denticles. Interval between denticles straight. Mesotibia and metatibia on external side with a small denticle or merely a ridge. Mesotibia ending in two sharp apical spines and carrying two spurs. Side of hind coxa very large, rounded and well visible from above. Posterolateral projection of hind coxa very pronounced and pointed. Metatibia only lightly curved and ending in two short spines. Spine on inside edge usually larger and interval between spines straight. Metatibia carrying two spurs of approximately equal length.

Abdomen. Sternites 2-5 glabrous medially. Anterior edge of each sternite with row of long setae. Sides of sternites heavily pubescent. Posterior area of sternite 6 setose. Pygidium densely rugose in concentric circles. Center of sternites without impression. Parameres (Fig. 9) yellowish-brown. Lamina interior approximately 2 mm long, width to length ratio approximately 1:3, expanding towards apex. Dorsal cleft large, broadly arched, extending over two-thirds of lamina interior. In lateral view, lamina interior is angled, tapers and curves inwards from point where dorsal cleft begins.

Female (Figs 4-6). Listed are only differences from male. Only very slightly larger than male. Head. Clypeus less setose. Club of antenna thicker and approximately one third as long as clypeus. Thorax. Mesometasternal protrusion sparsely setose to almost glabrous. Metasternum less setose, disc and areas on either side sparsely setose to almost glabrous. Setae on internal edge of metatibia longer. Protibia wider, denticles larger. Mesotibia bearing a small denticle on external side. Two larger spines at apex of mesotibia. Metatibia bearing a large spine in middle of dorsal side. Metatibia ending in two long spines with rounded interval.

Remarks. The pilosity (or setae-related impressions in worn specimens) of the mesometasternal protrusion is likely to provide the most recognizable and consistent feature for determining gender. Size, spacing and interval of denticles on the protibia are unreliable characters since heavily worn females cannot be distinguished from males.

Discussion. Of the four species originally placed in *Lenosoma*, the type species *L. fulgens* is now the only remaining species but also the one which least embodies the original characters of the genus. Our redescription of *Lenosoma* thus serves two purposes: to align the characters of the genus with that of its sole species and, since all types are females, to provide a way to differentiate between the two very similar sexes.

***Lenosoma fulgens* (Macleay, 1863)**

(Figs 4-6, 9)

Schizorhina (*Cetonia*) *fulgens* Macleay, 1863: 18.

Cetonia fulgens; Gemminger & Harold, 1869: 1325.

Lenosoma fulgens; Kraatz, 1880: 212.

Schizorhina viridicuprea Macleay, 1871: 204.

Schizorhina viridicuprea; Berge, 1884: 141.

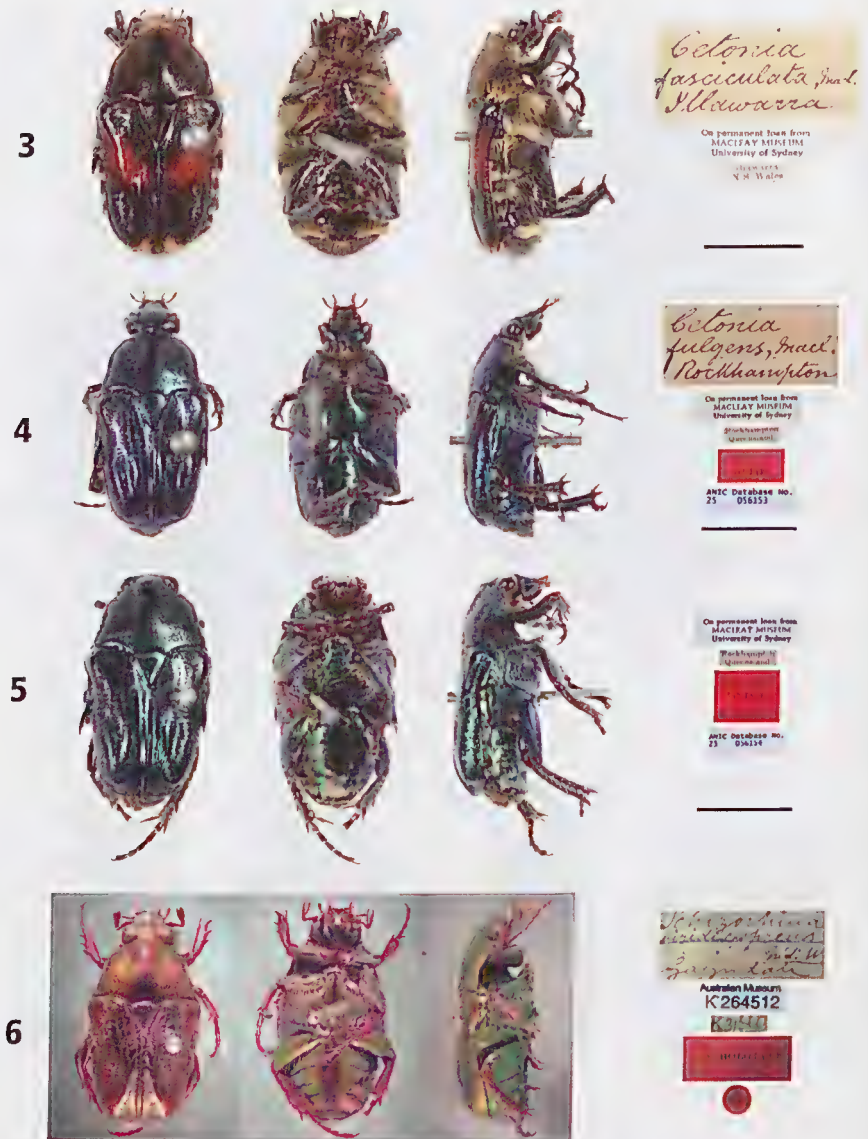
Type specimens. *Schizorhina fulgens*: *Lectotype* ♀, Rockhampton, Qld, identification label '*Cetonia fulgens*', 25-056153 (ANIC), hereby designated from syntype (Fig. 4). *Paralectotype* ♀, Rockhampton, Qld., 25-056154 (ANIC), from syntype (Fig. 5). *Schizorhina viridicuprea*: *Holotype* ♀, Gayndah, Qld, K264512 / AM K31660 (AM) (Fig. 6).

Other specimens examined. QUEENSLAND: 1 ♀, Paluma, Qld, i.2000, T.M. Hanlon & M.J. Powell, MIC60784-001 [AIF]; 1 ♀, Mt Aberdeen, Qld, 5-7.xii.1996, G. Monteith, D. Cook & I. Cook, T160503 [QM]; 3 ♂♂, 6 ♀♀, 1 undetermined gender, Mackay, Qld, i.1899, T159346 (♀) [QM], 6.xii.1975, F.T. Fricke, MIC60783-001 (♂) [AIF], R. Illidge, T159344 (♂), T159347 (♀), T159345 (♀) [QM], H.W. Brown, MIC60781-001 (♀), MIC60781-002 (♀) [AIF], (♂♀ plus specimen 5175) [SAM]; 3 ♂♂, Rockhampton, Qld, 3.i.1945, Sutton & Vallis, MIC60812-001, MIC60815-001 [AH]; 1 ♂, 1 ♀, Westwood, Qld, 3.xii.1975, F.T. Fricke, MIC60782-001 (♂) and MIC60782-002 (♀) [AIF]; 4 specimens, Marmor, Qld, [SAM]; 1 ♀, Edungalba, Qld, 2.xii.1975, F.T. Fricke, MIC60786-001 [AIF]; 1 ♂, Archookoora State Forest, Qld, 24.i.1972, M. De Baar, [M&GDB]; 2 ♂♂, Mt Kiargarow, Qld, xii.1972, M. De Baar, [M&GDB]; 1 specimen, Kilcoy, Qld, 6.i.1981, M. De Baar & M. Hockey, 10874 [QFIC]; 2 ♀♀, 25.7 km N of Mount Glorious, Qld, 14.ii.1982, AH, MIC60811-001 and 1.ii.1987, AH, MIC60814-001 [AH]; 3 ♂♂, 1 ♀, Mount Glorious, Qld, 16.xii.1983, AH, MIC60817-001 (♂), 23.xii.1983, AH, MIC60816-001 (♂), MIC60820-001 (♂), 23.xii.1983, AH, MIC60819-001 (♀) [AH]; 1 ♂, 'The Goat Track', Mount Nebo, Qld, 11.xii.1980, AH, MIC60813-001 [AH]; 4 ♂♂, 3 ♀♀, 'Many Peaks' (ambiguous), H.W. Brown, MIC60787-001 (♂), MIC60785-001 (♂) [AIF], T160504 (♂), T159343 (♀) [QM], MIC60810-001 (♂), MIC60809-001 (♀), MIC60818-001 (♀) [AH]; 1 specimen, no data [SAM]; 1 ♀, without location, 'Wilga, WA' (improbable), 15.xi.1970, K. Carnaby, T159432 [QM].

Discussion. Macleay (1863) did not designate type specimens in his original description of *S. fulgens* and only two syntypes are known. We have, therefore, designated syntype 25-056153 (ANIC) as the lectotype because it is a complete specimen. The other specimen, 25-056154 (ANIC), has missing tarsi on several legs and becomes a paralectotype.



Figs 1-2. *Storeyus pseudodipterus*. (1) holotype male, T160500 (QM), views: dorsal (top left) ventral (bottom left), lateral (bottom, second from left); (2) paratype female, T159349 (QM), views: dorsal (top right), ventral (bottom, second from right), lateral (bottom right). Scale bars = 5 mm. Figs 1-2 © Queensland Museum 2009; photos by Geoff Thompson.



Figs 3-6. *Schizorhina* spp. (3) *S. (Cetonia) fasciculata* holotype male, views: dorsal, ventral, lateral, labels; (4) *S. (Cetonia) fulgens* lectotype designated from syntype female 25-056153 (ANIC), views: dorsal, ventral, lateral, labels; (5) *S. (Cetonia) fulgens* paralectotype from syntype female 25-056154 (ANIC), views: dorsal, ventral, lateral, labels; (6) *S. viridicuprea* holotype female K264512 / K31660 (AM), views: dorsal, ventral, lateral, labels. Scale bars = 5 mm. Figs 3-5 © CSIRO ANIC 2009. Fig. 6 © Australian Museum 2009; photos by Dr David Britton.

Storeyus gen. n.

Type species: *Schizorhina (Cetonia) fasciculata* Macleay, 1863, hereby designated.

Description. Male (Fig. 1). Small cetoniid. Mostly glossy, dark. Head. Posterior part of clypeus covered with setae. Galea bearing a very dense tuft of setae, radial and well visible from above. Clypeus long, its sides broadly rounded towards apex and with raised margins. Anterolateral arch wide. Anteromedian edge with shallow notch, visible from above and behind. Club of antenna approximately two-thirds as long as clypeus.

Thorax. Pronotum covered in long, dense setae except along glabrous midline, punctate to rugose towards lateral margins. Median strip of scutellum glabrous, its sides setose and rugose. Elytra at least sparsely covered in long setae. Humeral and antiapical umbones, posterior part of lateral declivity and discomedian costa glabrous or with fewer and shorter setae. Elytra, towards apex and lateral margin, rugose in wide arches, centering on anteapical umbone. A dense, curved tuft of long setae present in distal declivity. Underside of elytra densely pubescent towards apex, setae protrudent and visible in dorsal view. Mesometasternal suture forming sharp boundary between glabrous mesometasternal protrusion and setose metasternum. Metasternum covered with long, thin setae except in small, elongated, central area. Profemur, mesofemur and metatibia with a dense fringe of long setae on internal edges. Lateral edge of pronotum slightly rounded, s-shaped or impressed in distal half, strongly indented in basal half, with sharp keel which becomes broad and flat in posterolateral area. Basolateral margins distinctly emarginate, creating acute posterolateral angle. Anterior half with elevated longitudinal midline, projecting above clypeus in lateral view. Elytra tapered, leaving lateral parts of abdominal sternites visible from above. Discolateral costa very pronounced except for an interval in posterior of mediodiscal area. Discomedian costa strongly elevated from posterior of mediodiscal area to anteapical umbone. Suture forming an elevated keel only in apical half or third. Mesometasternal protrusion rounded broadly or pointed medially. Protibia tridentate with widely spaced denticles. Interval between denticles somewhat straight, middle denticle weakly developed to almost absent. Mesotibia with subapical depression on external side. Mesotibia ending in two sharp apical spines and carrying two spurs. Hind coxa rectangular, posterolateral projection pointed, normal. Metatibia distinctly curved, bearing a small protrusion or spine in middle of dorsal side. Metatibia ending in three short spines and carrying two spurs of which internal spur is longer.

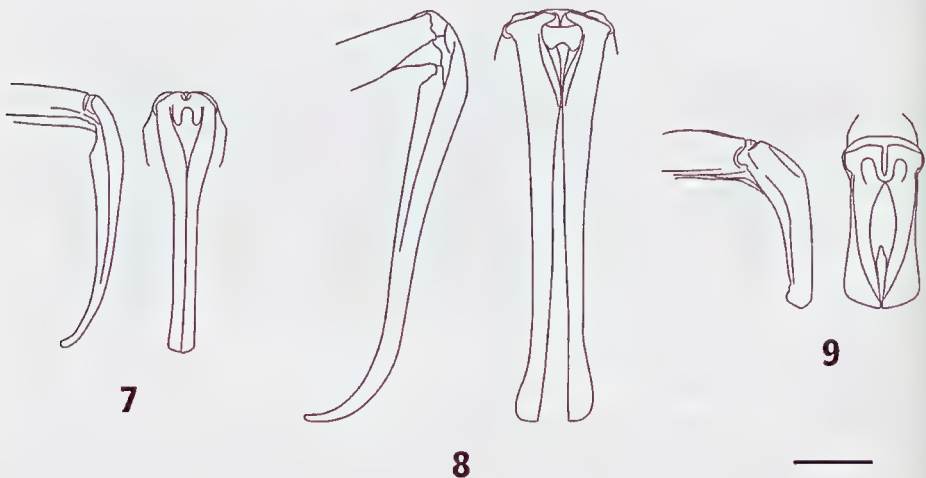
Abdomen. Posterior area of dorsal surface of abdominal sternites densely setose. Sternites 2-6 typically glabrous medially. Anterior edge of sternites 3-5 with row of long setae. Sternite 6 with large patch of long setae in center of each side of plate or entire side setose. Pygidium setose and densely rugose in concentric circles. Sternites protuberant under elytra in dorsal view.

Parameres (Figs 7, 8). Lamina interior very narrow and very long. Triangular dorsal cleft at base of lamina interior, one third to one fourth of length of lamina interior. A bi-lobed structure at base of dorsal cleft. In lateral view, lamina interior curving inwards. Ventral surface of lamina interior keeled, tapering at base.

Female (Figs 2, 3). Listed are only differences from male. Slightly larger and broader. Head. Clypeus less setose and setae shorter towards apex. Club of antenna shorter, at most half as long as clypeus. Thorax. Glabrous area along midline of pronotum wider. Metasternum less setose, glabrous area of disc larger. Profemur and mesofemur with fringe of long setae on internal edges. Elevated longitudinal midline of pronotum present but less developed. Elytra wider. Protibia wider and tridentate with equally well developed denticles. Interval between denticles somewhat rounded. Mesotibia bearing a large denticle at anterior base of subapical depression on external side. Two larger spines at apex of mesotibia. Metatibia only slightly curved, bearing a large spine in middle of dorsal side. Metatibia ending in three long spines. Abdomen. Sternite 6 entirely setose. Pygidium less setose.

Remarks. The size of the antennal club and the spines on the dorsal side of meso- and metatibia and are likely to be the most recognizable and consistent features for determining gender.

Etymology. The genus *Storeyus* is named in memory of the Canadian-born Australian entomologist Ross Storey. During his 32 years of employment with the Queensland Department of Primary Industries and Fisheries in Mareeba he was an inspiration and a mentor to many entomologists.



Figs 7-9. *Storeyus* and *Lenosoma* parameres. (7) *S. pseudodipterus*, lateral, dorsal; (8) *S. fasciculatus*, lateral, dorsal; (9) *L. fulgens*, lateral, dorsal. Scale bar = 1 mm.

***Storeyus fasciculatus* (Macleay, 1863), comb. n.**

(Figs 3, 8)

Schizorhina (*Cetonia*) *fasciculata* Macleay, 1863: 19 (in subgenus *Cetonia* Fabricius, Section *Trichioideae* Macleay, sub-section *Lenosoma* Macleay).

Cetonia fasciculata: Gemminger & Harold, 1869: 1323.

Lenosoma fasciculata: Kraatz, 1880: 212.

Lenosoma fasciculatum: Lea, 1914: 143.

Type specimen. *Holotype* male, Illawarra, NSW, bearing label '*Cetonia fasciculata*' (ANIC) (Fig. 3).

Other specimens examined. QUEENSLAND: 1 ♂, Rockhampton, Qld, R. Higgins, T159348 [QM]; 1 ♂, 1 ♀, Caloundra, Qld, 28.ix.1913, H. Hacker, T160501 (♂) and T160502 (♀) [QM]; 1 ♀, Bunya Mountains, Qld, 10.xii.1972, M. De Baar, MIC60804-001 [M&GDB]; 7 ♂♂, 8 ♀♀, Mount Glorious, Qld, 14.xii.1983, AH, MIC60805-001 (♀), 16.xii.1983, AH, MIC60800-001 (♀), MIC60803-001 (♀), 18.xii.1983, AH, MIC60806-001 (♂), xii.1985, AH, MIC60801-001 (♂), 15.xi.1986, AH, MIC60802-001 (♂), 1.xii.1988, AH, MIC60807-001 (♀), MIC60808-001 (♀), i.1989, AH, MIC60795-001 (♂), MIC60799-001 (♀), xii.1989, MIC60796-001 (♂), 1.xii.1996, AH, MIC60798-001 (♀), 1999, MIC60797-001 (♂) [all AH], i.1989, MIC60773-001 (♂) [AIF]], 1.xii.1988, AH, MIC60780-001 (♀) [AIF]); 1 ♂, 1 ♀, Mount Nebo, Qld, 28.xii.1970, R. Zietek (♀) 23.xii.1981, R. Zietek (♂) [RZ]); 1 specimen, unknown location 'Q.N. Park' [possibly Mt Glorious], xii.1922, R. Illidge [SAM].

NEW SOUTH WALES: 3 ♂♂, 4 ♀♀, Acacia Plateau, NSW, 4.i.1995, MIC60772-001, MIC60772-002, MIC60772-003 (♂♂) and MIC60772-004, MIC60772-005, MIC60778-001, MIC60778-002 (♀♀) [AIF]); 1 ♀, Richmond River, NSW, MIC60777-001 [AIF]); 1 ♂, Ulong, NSW, xi.1976, F.T. Fricke, MIC60776-001 [AIF]); 5 ♂♂, 1 ♀, Dorrigo, NSW, 28.xi.1911, R.J.T. (♂♂), 26.xi.1916, R.J.T. (♂) [SAM]); xi.1976, F.T. Fricke, MIC60770-001, MIC60770-002 (♂♂), [AIF], W. Heron (?) [SAM]; 1 ♀, Dingo Tops, NSW, 3.i.1991, MIC60779-001 [AIF]); 2 ♂♂, Ourimbah, NSW, 18.xii.1989, R. Mayo, MIC60771-001, 1.xii.1988, R. Mayo, MIC60774-001 [AIF].

Redescription. Male. Characters of the genus. Length 13.8-17.6 mm, width 6-7 mm. Glossy, very dark brown to black. A large medium brown to red macula typically present as a bar covering lower half of anterior half of elytra, a wide area around scutellum is unmarked. In its most reduced form, macula is totally absent or reduced to core of region, in its most pronounced form, macula extends to near base of elytra. Pubescent, typically with thin, long, light yellow setae dorsally and with thicker, yellow setae ventrally.

Thorax. Large area of metasternal disc glabrous or very sparsely setose. Elevated longitudinal midline of pronotum well developed, in some cases ending in a knob. Mesometasternal protrusion bluntly pointed, seldom rounded. Mesometasternal suture separates anterior one-third of process. Protibia bidentate. Relict of middle denticle in form of a raised point nearer to rear denticle.

Abdomen. Center of sternites 3-5 with impression. Parameres (Fig. 8) dark yellowish-brown. Lamina interior approximately 6 mm long, width to length

ratio 1:4, tapering toward apical quarter then expanding slightly. In lateral view, straight in basal half then curving inwards in a large arc.

Female (Fig. 3). Characters of the genus. Listed are only differences from male. Length 15.3-18.3 mm, width 7-9 mm. Head. Clypeus less setose. Thorax. Elevated longitudinal midline of pronotum less well developed. Protibia tridentate, unlike male, same as generic character. Abdomen. Center of sternites 3-5 without impression.

Storeyus pseudodipterus sp. n.

(Figs 1-2, 7)

Type specimens. *Holotype* ♂, QUEENSLAND: Mt Lewis, end of the road, 7.i.1999, J.W. & P. Hasenpusch, T160500 [QM] (Fig. 1). *Paratypes*: 1 ♂, Windsor Tableland, Qld, 4.i.2002, D. Kitchin & T. Jack, T160047 [QM]; 3 ♂♂, 1 ♀, Julatten, Qld, 6.x.1990, JH, MIC60768-002 (♂) [AIF]*, MIC60768-001 (♂) [AIF]*, 22.xii.1993, JH, MIC60763-001 (♂) [AIF], T159349 (♀) [QM] (Fig. 2); 10 ♂♂, 7 ♀♀, Mt. Lewis, Qld., end of the road, 17.xi.1988, JH, MIC60756-001 (♀) [AIF]*, 6.i.1991, JH, on Lilly-Pilly blossom, MIC60792-001 (♂) [AH], 28.vii.1991, JH, MIC60765-001 (♂) [AIF]*, MIC60793-001 (♂) [AH]*, 6.ix.1991, JH, MIC60764-001 (♂) [AIF]*, 10.ix.1991, JH, 25-055613 (♂) [ANIC]*, 15.ix.1991, JH, MIC60766-001 (♂) [AM]*, MIC60794-001 (♂) [AH]*, 2.x.1991, JH, 25-056153 (♂) [ANIC]*, 4.x.1991, JH, MIC60759-001 (♀) [AM]*, 25-056154 (♀) [ANIC]*, 5.x.1991, JH, T-20539 (♂) [MV]*, 15.x.1991, JH, MIC60767-001 (♂) [AIF]*, 25-055614 (♀) [ANIC], 5.xi.1991, JH, MIC60757-001 (♀) [AIF]*, T-20540 (♀) [MV]*, 7.i.1999, J.W. & P. Hasenpusch, T160048 (♀) [QM]; 1 ♀, Kirrama Range, Qld, 20.xii.1991, J.W. & P. Hasenpusch, T159431 [QM]). Note: Specimens marked with an asterisk were reared from larval stage and date provided is date of emergence. Specimens T-20539 (MV) and MIC60767-001 (AIF) are DNA voucher specimens for the International Barcode of Life Project (<http://www.ibdproject.org/>).

Other specimens. QUEENSLAND: Wooroonooran National Park, Qld, several specimens observed but not collected, JH.

Description. Male (Fig. 1). Characters of the genus. Length 11.3-13.3 mm, width 5.2-6 mm. Glossy, dark brown dorsally, black ventrally. Strongly pubescent, typically with orange-brown or golden setae dorsally and pale yellow setae ventrally. Head. Clypeus black, reddish-black towards apex. Club of antenna brown to black. Clypeus, except for apical quarter, densely covered with thin, yellowish setae.

Thorax. Posterior edge of pronotum red. Elytra dark brown, reddish-brown or black with reddish-brown area from humeral umbone to middle of lateral declivity. Profemur and protibia very dark reddish-brown or black, mesofemur and metafemur black with dark reddish-brown apex. Tarsi maroon. Elytra densely covered in long setae. Posterolateral area of metasternum rugose. Mesometasternal protrusion small and rounded broadly. Mesometasternal suture close to apex of protrusion. Protibia short, middle denticle often weakly developed.

Abdomen. Narrow posterior band of each abdominal sternite reddish-black in some specimens. Posterior area of dorsal surface of abdominal sternites densely setose with same pale yellow colour as ventral setae. Pygidium reddish-black to black. Center of sternites 3-5 with very light or no impression. Parameres (Fig. 7) yellowish-brown. Lamina interior approximately 3.5 mm long, width to length ratio 1:4, same width along apical half. In lateral view, inwards curvature of lamina interior particularly pronounced in apical third.

Female (Fig. 2). Characters of the genus. Listed are only differences from male. Length 12.1-16.1 mm, width 5.5-7.3 mm. Dorsally less setose. Thorax. Femur, tibia and tarsi dark reddish-brown, mesofemur and metafemur same but darker. Costa slightly less pronounced, elytra seeming flatter. Abdomen. Center of sternites 3-5 without impression.

Etymology. Originating from the Greek, '*pseudodipterus*' means 'like a fly'. The species has been named for its diminutive size, its fly-like appearance and especially its habit of hovering as described in the ecology section.

Discussion. Our examination of 106 specimens, comparison of parameres and mapping of collection localities show that *S. pseudodipterus* is a new species and that *S. pseudodipterus* and *S. fasciculatus* form the basis of a new genus, *Storeyus*. We designate *S. fasciculatus* as the type species of this genus. *Storeyus* can be separated from *Lenosoma* by characters listed in Table 1.

Table 1. Most visible morphological differences between the genera *Storeyus* and *Lenosoma*.

Character	<i>Storeyus</i>	<i>Lenosoma</i>
Parameres	lamina interior very elongated, dorsal cleft small	short and stout, dorsal cleft almost length of lamina interior
Elytra	narrow, exposing abdominal sternites	covering sternites completely
Distal declivity	with dense tuft of long setae	without particular pilosity
Sternite 6	with dense patch of long setae on sides	without particular pilosity
Number of spines at apex of metatibia	3	2
Sternites 3-5 in male	with impression	without impression
Middle of pronotum towards apex	with keel or blunt projection	elevated but broadly rounded
Hind coxa	rectangular, posterolateral projection normal	widened, side curved, posterolateral projection large
Internal side of hind tibia	with dense row of long setae	with few, short setae
Scutellum	setose except for median	glabrous

Ecology. Adult *Storeyus pseudodipterus* feed on flowers of rainforest trees. They are active in the months from September to January. At Mount Lewis, specimens were collected on the flowers of a 40 m tall *Syzygium* Gaertn., which had bloomed several weeks earlier and was bearing only a dozen flowers on a single branch. Specimens were captured by climbing a neighboring 10 m tall tree and using a net mounted on a 7 m extension. The weather at the time of collecting was very cold and overcast with drizzling mist. Each time the sun broke through the mist, several *S. pseudodipterus* appeared and buzzed around the flowers, closely resembling hovering flies. Small buprestids of the species *Castiarina hasenpuschi* Barker, 1993 and *Castiarina nebula* Barker, 1993 (both undescribed at the time) were also observed on the flowers (Barker 1993). At Wooroonooran National Park, specimens were seen flying around flowers of *Cardwellia sublimis* F. Mueller. In the Kirrama Range, it was found feeding on flowers of *Cardwellia sublimis* and *Symplocos cochinchinensis* var. *gittonsii* Noot. At this site they were flying together with the buprestid species *Castiarina hemizostera* Barker, 1996, *Castiarina prolata* Barker, 1995 and *Castiarina jackhasenpuschi* Barker, 1996. The life cycle and larval morphology of *S. pseudodipterus* are known (Hasenpusch and Moeseneder, in prep.).

Storeyus fasciculatus also occurs mainly in rainforests. Anthony Hiller collected this species at his Mount Glorious home on flowers of *Angophora hispida* (Sm.) Blaxell, a species of *Barklya* F. Muell. and *Backhousia myrtifolia* Hook. & Harv., and at Mt. Nebo on *Waterhousea floribunda* (F. Muell.) B. Hyland. We note with interest that he observed a female flying around a compost bin in his garden, possibly in search of a site to oviposit. In New South Wales, *S. fasciculatus* was found on bushes: at the edge of rainforest on a yellow-flowering bush at Dorrigo and on a white-flowering bush at Ulong.

At the southern end of its range, in the Mount Nebo and Mount Glorious area, adult *Lenosoma fulgens* feed on the flowers of *Melicope micrococca* (F. Muell.) T.G. Hartley and *Barklya syringifolia* F. Muell. in rainforest. Further north the beetles occur in scrub, flying to *Bursaria spinosa* Cav. flowers at Mt Kiangarow, on flowers in vine scrub at Edungalba, on a shrub with small white flowers at Mackay (Lea 1914) and in open forest at Mt. Aberdeen.

Distribution and abundance (Fig. 10). *S. pseudodipterus* occurs in and near mountain ranges with rainforest cover, between 500 and 1000 m altitude, from the Kirrama Range to the Mossman Gorge Section of the Daintree National Park, northern Queensland. Evidently, *S. pseudodipterus* is a rare species and at this time we are not aware of any other specimens in collections aside from the 24 which are listed here. *S. fasciculatus* and *L. fulgens* are rarely collected. However, at times when host plants are flowering, they may be locally abundant as reported by Lea (1914) for *L. fulgens* at Mackay.

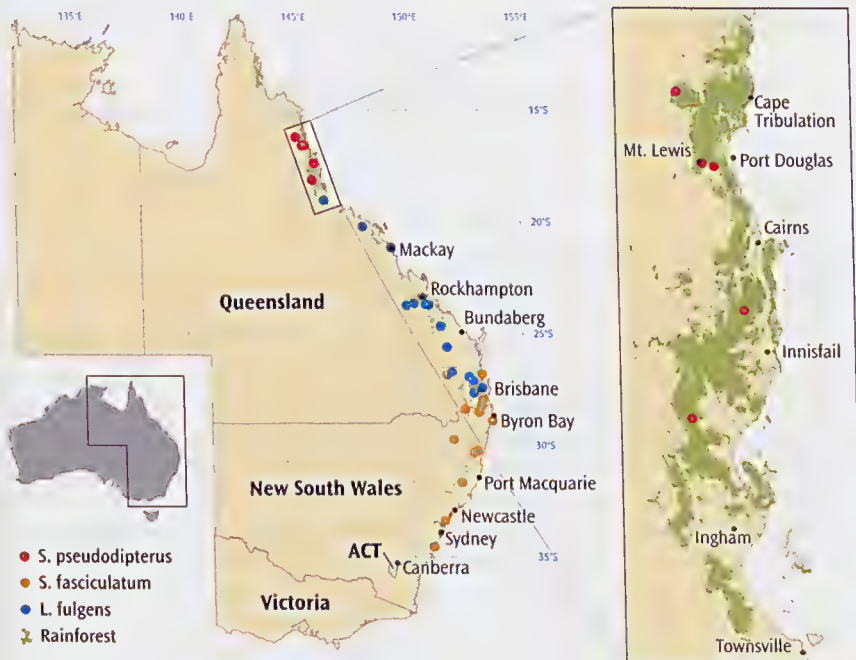


Fig. 10. Collection localities of *S. pseudodipterus* (red), *S. fasciculatum* (beige) and *L. fulgens* (blue). Inset = northern Queensland, showing locations of *S. pseudodipterus*.

Acknowledgements

Staff of the QM: Dr Federica Turco for her very generous assistance with taxon descriptions and with specimen loans, Geoff Thompson for photographs of *S. pseudodipterus* holotype and paratype and Drs Christine Lambkin and Geoff Monteith for their continued support of our research; Anthony Hiller (Mount Glorious) for invaluable ecological information and loans from his large and important collection of relatively recent *Lenosoma* and *Storeyus* specimens; Cate Lemann, Tom Weir, You Ning Su, Natalie Barnett and Dr Beth Mantle (ANIC) for assistance with type specimens; Dr David Britton (AM) for assistance with and photographs of type specimens and other specimen data; Catriona McPhee (MV) for assistance with type specimens; the Department of Environment and Resource Management, Qld, for collecting permits; Murdoch and Glenda De Baar (Corinda) for loans from their collection and ecology information; Dr Peter Hudson (SAM) for images and specimen data; Richard Zietek (Capalaba) for specimen data; the QFIC for specimens (via M&GDB); Dr Bruce Halliday (ANIC) for advice with nomenclature; Megan Thomas (Queensland Herbarium, EPA) for help with the validity of plant names; Drs Anthony Richardson and Frank Coman (CSIRO CMAR) for use of the plankton Leica stereomicroscope; Dominique Moeseneder (Redland Bay) for Latin text translations.